ENVIRONMENTAL STATEMENT - VOLUME 3 - APPENDIX 18.5

Cumulative Assessment Matrix

Drax Bioenergy with Carbon Capture and Storage

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations, 2009 – Regulation 5(2)(a)

Document Reference Number: 6.3.18.5

Applicant: Drax Power Limited

PINS Reference: EN010120

REVISION: 01

DATE: May 2022

DOCUMENT OWNER: WSP UK Limited

AUTHOR: L Ives

APPROVER: B Stocking

PUBLIC

TABLE OF CONTENTS

TABLES

1. CUMULATIVE ASSESSMENT MATRIX

1.1.1. **Table 1.1** presents the assessment of cumulative impacts with the Proposed Scheme.

1.1.2. Information provided in **Table 1.1** below represents likely significant effects of the Proposed Scheme with third party developments using publicly available information available at the time of conducting the assessment.

Table 1.1 - Cumulative Assessment Matrix – Construction and Operation

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
Air Quality					
1	EN010081 Eggborough CCGT	Permitted EIA Development	Operation: Air quality modelling of cumulative impacts reported in **Chapter 6 (Air Quality)** has incorporated operational emissions associated with Eggborough CCGT. The modelled results have demonstrated that cumulative emissions in the With Proposed Scheme and other projects scenario will have no significant effect on local air quality with respect to human health. For ecological receptors, the cumulative impact assessment has identified the potential for significant effects in relation to ammonia concentrations and nitrogen and acid deposition at a number of statutory and non-statutory designated sites within the operational study area.	Mitigation applied to the Proposed Scheme Main Stack to reduce potential impacts relating to acid deposition attributed to the With Proposed Scheme scenario emissions only. Cumulative emissions modelling also incorporated the mitigated emissions. Specifically, the Main Stack mitigation applied to the With Proposed Scheme scenario was: ~ Reduce SO_2 emissions by 40%, applied to the two BECCS Biomass Units; ~ Increase exit temperature of flue gases from the BECCS units to 103ºC.	Operation: Without and with Proposed Scheme mitigation, the potential for significant effects on a number of statutory and non-statutory designated sites could not be screened out. The results of the cumulative impact assessment were passed to the Project Ecologist to determine whether or not there is a likely significant effect. The outcomes of this analysis are reported in the ecology cumulative assessment below, and in **Section 4.3** of the **Habitats Regulations Assessment Report** (document reference 6.8.1)).
3	2021/0450/SCP Scotland to England Green Link 2 Project	Scoping	Construction: Potential for some temporal overlap in construction activities, with the potential to generate dust emissions and associated local air quality impacts. Provided that each project implements appropriate dust mitigation measures, applied via a CEMP or similar, there will be no significant air quality effects.	Appropriate construction mitigation measures to be implemented for the Proposed Scheme are detailed in **Chapter 6 (Air Quality)** and **Appendix 6.2**. Provided that the SELG2 project implements appropriate measures during the construction phase, there will be no significant air quality effects.	Construction: **Neutral (not significant)**

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
4	EN010114 Keadby 3 Low Carbon Gas Power Station	Submitted EIA development	Operation: Air quality modelling of cumulative impacts reported in **Chapter 6 (Air Quality)** has incorporated operational emissions associated with Keadby 3. The modelled results have demonstrated that cumulative emissions from the Proposed Scheme and other projects will have no significant effect on local air quality with respect to human health. For ecological receptors, the cumulative impact assessment has identified the potential for significant effects in relation to ammonia concentrations and nitrogen and acid deposition at a number of statutory and non-statutory designated sites within the operational study area.	Mitigation applied to the Proposed Scheme Main Stack to reduce potential impacts relating to acid deposition attributed to the With Proposed Scheme scenario only. Cumulative emissions modelling also incorporated the mitigated emissions. Specifically, the Main Stack mitigation applied to the With Proposed Scheme scenario was: ~ Reduce SO_2 emissions by 40%, applied to the two BECCS Biomass Units; ~ Increase exit temperature of flue gases from the BECCS units to 103ºC.	Operation: Without and with Proposed Scheme mitigation, the potential for significant effects on a number of statutory and non-statutory designated sites could not be screened out. The results of the cumulative impact assessment were passed to the Project Ecologist to determine whether or not there is a likely significant effect. The outcomes of this analysis are reported in the ecology cumulative assessment below, and in **Section 4.3** of the **Habitats Regulations Assessment Report** (document reference 6.8.1)).
6	NY/2022/0027/SCO Barlow Ash Mound, North West of Drax Power Station	Scoping	Construction: Potential for some temporal overlap in construction activities, with the potential to generate dust emissions and associated local air quality impacts. Provided that each project implements appropriate dust mitigation measures, applied via a CEMP or similar, there will be no significant air quality effects.	Appropriate construction mitigation measures to be implemented for the Proposed Scheme are detailed in **Chapter 6 (Air Quality)** and **Appendix 6.2** and secured as part of the CEMP required by DCO Requirement. Provided that the Barlow Ash Mound project implements appropriate measures during the construction phase, there will be no significant air quality effects.	Construction: **Neutral (not significant)**

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
7	2021/0120/FULM Development of a Horticultural Facility for indoor farming and agri-tech	Permitted development	Construction: Potential for some temporal overlap in construction activities, with the potential to generate dust emissions and associated local air quality impacts. Provided that each project implements appropriate dust mitigation measures, applied via a CEMP or similar, there will be no significant air quality effects.	Appropriate construction mitigation measures to be implemented for the Proposed Scheme are detailed in **Chapter 6 (Air Quality)** and **Appendix 6.2** and secured as part of the CEMP required by DCO Requirement. Provided that the other project implements appropriate measures during the construction phase, there will be no significant air quality effects.	Construction: **Neutral (not significant)**
8	2020/1357/FULM Development of an energy storage facility, Land off New Road, Drax	Permitted development	Construction: Potential for some temporal overlap in construction activities, with the potential to generate dust emissions and associated local air quality impacts. Provided that each project implements appropriate dust mitigation measures, applied via a CEMP or similar, there will be no significant air quality effects.	Appropriate construction mitigation measures to be implemented for the Proposed Scheme are detailed in **Chapter 6 (Air Quality)** and **Appendix 6.2** and secured as part of the CEMP required by DCO Requirement. Provided that the energy storage project implements appropriate measures during the construction phase, there will be no significant air quality effects.	Construction: **Neutral (not significant)**
47	20/01774/TIPA Energy from Waste Plant, Land northwest of Sandall Stones Road, Kirk Sandall, Doncaster	Submitted, awaiting decision	Operation: Air quality modelling of cumulative impacts reported in **Chapter 6 (Air Quality)** has incorporated operational emissions associated with Eggborough CCGT. The modelled results have demonstrated that cumulative emissions in the With Proposed Scheme and other projects scenario will have no significant effect on local air quality with respect to human health. For ecological receptors, the cumulative impact assessment has identified the potential for significant effects in relation to ammonia concentrations and nitrogen and acid deposition at a number of statutory and non-statutory designated sites within the operational study area.	Mitigation applied to the Proposed Scheme Main Stack to reduce potential impacts relating to acid deposition attributed to the With Proposed Scheme scenario emissions only. Cumulative emissions modelling also incorporated the mitigated emissions. Specifically, the Main Stack mitigation applied to the With Proposed Scheme scenario was:	Operation: Without and with Proposed Scheme mitigation, the potential for significant effects on a number of statutory and non-statutory designated sites could not be screened out. The results of the cumulative impact assessment were passed to the Project Ecologist to determine whether or not there is a likely significant effect. The outcomes of

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
				- Reduce SO_2 emissions by 40%, applied to the two BECCS Biomass Units; - Increase exit temperature of flue gases from the BECCS units to 103ºC.	this analysis are reported in the ecology cumulative assessment below, and in **Section 4.3** of the **Habitats Regulations Assessment Report** (document reference 6.8.1)).
49	2021/1089/FULM Development of an battery storage facility, Land off Hales Lane, Drax	Submitted, awaiting decision	Construction: Potential for some temporal overlap in construction activities, with the potential to generate dust emissions and associated local air quality impacts. Provided that each project implements appropriate dust mitigation measures, applied via a CEMP or similar, there will be no significant air quality effects.	Appropriate construction mitigation measures to be implemented for the Proposed Scheme are detailed in **Chapter 6 (Air Quality)** and **Appendix 6.2** and secured as part of the CEMP required by DCO Requirement. Provided that the battery storage project implements appropriate measures during the construction phase, there will be no significant air quality effects.	Construction: **Neutral (not significant)**
74	Unknown Keadby 2 Power Station	Consented, included in Keadby 3 baseline.	Operation: Air quality modelling of cumulative impacts reported in **Chapter 6 (Air Quality)** has incorporated operational emissions associated with Eggborough CCGT. The modelled results have demonstrated that cumulative emissions in the With Proposed Scheme and other projects scenario will have no significant effect on local air quality with respect to human health. For ecological receptors, the cumulative impact assessment has identified the potential for significant effects in relation to ammonia concentrations and nitrogen and acid deposition at a number of statutory and non-statutory designated sites within the operational study area.	Mitigation applied to the Proposed Scheme Main Stack to reduce potential impacts relating to acid deposition attributed to the With Proposed Scheme scenario emissions only. Cumulative emissions modelling also incorporated the mitigated emissions. Specifically, the Main Stack mitigation applied to the With Proposed Scheme scenario was: ~ Reduce SO_2 emissions by 40%, applied to the two BECCS Biomass Units; ~ Increase exit temperature of flue gases from the BECCS units to 103ºC.	Operation: Without and with Proposed Scheme mitigation, the potential for significant effects on a number of statutory and non-statutory designated sites could not be screened out. The results of the cumulative impact assessment were passed to the Project Ecologist to determine whether or not there is a likely significant effect. The outcomes of this analysis are reported in the ecology cumulative assessment below, and in **Section 4.3** of the **Habitats Regulations Assessment**

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
					Report (document reference 6.8.1)).
Noise and Vibration					
3	2021/0450/SCP SEGL2 (Scotland to England Green Link 2) project	Scoping	**Construction:** Development currently at scoping stage. The cumulative effects will be influenced by the construction of the underground cable, if there are works simultaneous with the Project. For instance, receptor Wren Hall is within less than 50m to the construction activities of this development, therefore, noise arising from the excavation and trenching techniques are likely to be dominant. The cumulative effects are expected to be Moderate. **Operation**: Cumulative effects expected to be Neutral.	Best Practicable Means for construction. Noise mitigation at source for Drax BECCS equipment during operation.	**Construction**: Effects arising from the construction of the underground cable will be dominant. The cumulative residual effects are expected to be **Slight Adverse** (**not significant)**. **Operation**: Cumulative effects expected to be **Neutral**.
6	NY/2022/0027/SCO Barlow Mound recovery of ash resource	Scoping	**Construction**: Development currently at scoping stage. A construction assessment will be undertaken in accordance with BS5228. There is potential for adverse effects at Barlow. The cumulative effects are expected to be Moderate. **Operation**: Development currently at scoping stage. There is potential for effects at Barlow. An operational noise assessment will be undertaken in accordance with BS4142. The cumulative effects are expected to be Moderate.	Best Practicable Means for construction. Noise mitigation at source for Drax BECCS equipment during operation.	**Construction**: Development currently at scoping stage. A construction assessment will be undertaken in accordance with BS5228. There is potential for effects at Barlow. The cumulative residual effects are expected to be **Slight Adverse** (**not significant)**. **Operation**: Development currently at scoping stage. There is potential for effects at Barlow. An operational assessment will be undertaken in accordance with BS4142. The cumulative residual effects are expected to be Slight.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
7	2021/0120/FULM Development of an existing horticultural facility for indoor farming	Permitted development	**Construction**: Potential effects during construction period at Camblesforth. The cumulative effects are expected to be Moderate. **Operational**: Condition 16 requires rating levels to be no greater than +5dB compared to background noise levels. The cumulative effects are expected to be Moderate.	Best Practicable Means for construction. Noise mitigation to comply with Condition 16 of the development. Noise mitigation at source for Drax BECCS equipment during operation.	**Construction**: Potential effects during construction period at Camblesforth. The cumulative residual effects are expected to be **Slight Adverse** (**not significant)**. **Operational**: Condition 16 requires rating levels to be no greater than +5dB compared to background noise levels. The cumulative residual effects are expected to be Slight.
8	2020/1357/FULM Development of an energy storage facility	Permitted development	**Construction**: There is low potential for adverse cumulative effects. **Operational**: Condition 16 requires rating levels to be no greater than +5dB compared to background noise levels. There is low potential for adverse cumulative effects.	Best Practicable Means for construction. Noise mitigation at the development to comply with Condition 16. Noise mitigation at source for Drax BECCS equipment during operation.	**Construction**: Low potential for cumulative effects. The cumulative residual effects are expected to be **Slight Adverse** (**not significant)**. **Operational**: Condition 16 requires rating levels to be no greater than +5dB compared to background noise levels. Low potential for cumulative effects. The cumulative residual effects are expected to be Neutral.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
9	2021/0348/SCN Five wind turbines	Screening request	**Construction**: There is low potential for cumulative effects during construction. **Operational**: There is low potential for cumulative effects during operation. However, a noise assessment should be prepared with a methodology agreed with the EHO.	Best Practicable Means for construction. Implement mitigation advice on a noise assessment report for this development. Noise mitigation at source for Drax BECCS equipment during operation - as secured by a dDCO requirement.	**Construction**: Low potential for cumulative effects. The cumulative residual effects are expected to be **Slight Adverse** (**not significant)**. **Operational**: Low potential for cumulative effects. The cumulative residual effects are expected to be Slight.
10	2021/0788/EIA Development of a ground-mounted solar farm	Submitted, not decided	**Construction**: Given size of the development there is low potential for adverse cumulative effects. **Operational**: Potential for cumulative effects on receptors west of Drax.	Best Practicable Means for construction. Noise mitigation to comply with agreed noise limits for this development. Noise mitigation at source for Drax BECCS equipment during operation.	**Construction**: Low potential for cumulative effects. The cumulative residual effects are expected to be **Slight Adverse** (**not significant)**. **Operational**: Potential for cumulative effects on receptors west of Drax. The cumulative residual effects are expected to be Slight.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
12	2020/0994/FULM Drax Demolition of Flue Gas Desulphurisation (FGD) Plant	Permitted development	**Construction**: Low potential for cumulative effects.	Best Practicable Means for construction.	**Construction**: Low potential for cumulative effects.
20	2019/0458/OUTM Residential development for up to 40 custom built dwellings	Submitted, not decided	**Construction**: Due to size of the development and likely programme. There is low potential for cumulative effects. **Operational**: Due to likely number of vehicle movements during operation of this development, there is low potential for cumulative effects.	Best Practicable Means for construction. Noise mitigation at source for Drax BECCS equipment during operation.	**Construction**: Low potential for cumulative effects. The cumulative residual effects are expected to be Neutral. **Operational**: Low potential for cumulative effects. The cumulative residual effects are expected to be Neutral.
49	2021/1089/FULM Development of a battery storage facility	Submitted, not decided	**Construction**: There is low potential for cumulative effects. **Operational**: There is low potential for cumulative effects. The noise assessment report No. 102592-2, December 2021, indicates that an assessment was undertaken based on BS4142 and that there are no significant effects expected from the development.	The development includes a 4.5 m noise barrier to reduce noise levels at the nearest receptor. Noise mitigation at source for Drax BECCS equipment during operation.	**Construction**: Low potential for cumulative effects. The cumulative residual effects are expected to be Neutral. **Operational**: Low potential for cumulative effects. The cumulative residual effects are expected to be Slight.
Ecology					
1	EN010081 Eggborough CCGT	Permitted EIA development	Construction: No cumulative effects are predicted during construction. Operation: The only potential cumulative impact pathway identified is for increased cumulative air quality impacts on designated sites. Operational emissions in the With Proposed Scheme scenario could be additive with those from Development 1. This would result in increased nitrogen and acid deposition, and elevated concentrations of nitrous oxides (NOx) and ammonia (NH_3) at designated sites relative to operation of the Proposed Scheme alone. Cumulative air quality modelling is presented in **Section 6.12** of **Chapter 6** (Air Quality) of the ES (document reference 6.1.6). It should be noted that the air quality modelling does not consider cumulative air quality impacts on a project by project basis, rather it provides modelled outputs for the Proposed Scheme plus all other relevant	Construction: none required Operation: operational emissions control measures from the Proposed Scheme.	**Construction:** N/A **Operation**: Cumulative residual effects are expected to be neutral, not significant.

			emitting developments. The assessment presented below is based on dispersion modelling of the operational emissions of the Proposed Scheme plus operational emissions from Developments 1, 4, 5, 47, and 74. It is neither helpful or realistic to assess the operational emissions of the Proposed Scheme plus Development 1 only. The detailed ecological assessment of cumulative air quality effects (pre-mitigation) on European Sites is presented in Table 3.14 of the Habitats Regulations Assessment Report (document reference 6.8.1). The HRA Report identified the potential for Likely Significant Effects arising from cumulative air quality impacts (acid deposition) in relation to Lower Derwent Valley SAC, Lower Derwent Valley Ramsar, Thorne Moor SAC and Skipwith Common SAC. In addition, the HRA Report identified the potential for Likely Significant Effects arising from cumulative air quality impacts (nitrogen deposition) in relation to Thorne Moor SAC. The 1% screening criterion is exceeded for these European Sites and pollutants. No exceedances of the 1% screening criterion are predicted for other pollutants or for other European Sites. These effects have been considered in detail in the Appropriate Assessment section (Section 4) of the HRA Report (document reference 6.8.1). The HRA Report considers measures to mitigate (reduce) the impacts and effects of operational emissions in the With Proposed Scheme scenario on ecological receptors. These emission control measures act to reduce the concentration of SO2 and NH3 in the exhaust plume from the Main Stack. The temperature of emissions from the Main Stack is also increased. This increases the buoyancy of the gas leaving the Main Stack, which increases the dispersion of the plume. These measures reduce the concentrations / rate of deposition of pollutants onto European Sites and other ecological receptors. These measures are described in full in Section 6.10 of Chapter 6 (Air Quality) of Volume 1 of the ES (document reference 6.1.6). With these mitigation measures applied, the 1% air quality screening criterion is exceeded for the following European Sites and pollutants: ~ Lower Derwent Valley SAC and Ramsar – 1.9% of Critical Load for acid deposition; ~ Thorne Moor SAC – 1.9% of Critical Load for acid deposition, 1.7% of Critical Load for nitrogen deposition, 1.1% of Critical Level for NH3 concentrations. There are no exceedances for any other European Sites or any other pollutants. The cumulative air quality impacts are not predicted to lead to perceptible effects to Lower Derwent Valley SAC and Ramsar, or to Thorne Moor SAC. This is due to the low magnitude of the cumulative impact that has been modelled; the series of conservative assumptions underpinning the air		

			quality modelling, in particular assuming full load operation of all developments considered in the cumulative air quality modelling which in reality is extremely unlikely to occur; evidence from literature reviews; and the significant overall reductions in emissions of SO2 from Drax Power Station (and other sources) as a contributor to acidification in recent decades. The detailed analysis of these factors is presented in Section 4.3 of the HRA Report (document reference 6.8.1). Cumulative air quality effects are also relevant to a number of other statutory nationally designated sites. With the emissions control measures described above applied, the 1% air quality screening criterion is exceeded for the following nationally designated sites and pollutants: ~ Lower Derwent Valley National Nature Reserve; ~ Breighton Meadows SSSI – 1.9% of Critical Load for acid deposition; ~ Derwent Ings SSSI – 1.6% of Critical Load for acid deposition; ~ Barn Hill Meadow SSSI – 1.9% of Critical Load for acid deposition; and ~ Thorne Moor SSSI – 1.9% of Critical Load for acid deposition, 1.7% of Critical Load for nitrogen deposition, 1.1% of Critical Level for NH3 concentrations. Breighton Meadows SSSI and Derwent Ings SSSI are both underpinning SSSI for the Lower Derwent Valley SAC, SPA, and Ramsar. The Air Pollution Information System (APIS) (Air Pollution Information system, undated) identifies no features of Breighton Meadow SSSI as being more sensitive to air quality impacts than the SAC qualifying interests. As such, the analysis for Lower Derwent Valley SAC and Ramsar also applies to Breighton Meadows SSSI. Therefore, no perceptible ecological effects to SSSI site features are predicted. For Derwent Ings SSSI, a number of features are recorded in the SSSI citation, that are not qualifying interests of the Lower Derwent Valley SAC and Ramsar. These are also reflected in the APIS site-relevant Critical Loads information (Air Pollution Information System, undated). The site-relevant Critical Loads information on APIS indicates that the Critical Loads and Critical Levels used for assessment of the Lower Derwent Valley Ramsar remain conservative for assessment of effects on Derwent Ings SSSI. For example, APIS identifies golden plover as a feature of interest for the SSSI. APIS identifies habitats used by this species including ‘moss and lichen dominated mountain summits’ and ‘raised and blanket bogs’, which have nitrogen deposition Critical Load ranges of 5 – 10 kgN/ha/yr. A Critical Load range of 5 – 10 kgN/ha/yr suggests that these habitats are more sensitive to nitrogen deposition than the habitat (low and medium altitude hay meadows) which has been used for modelling nitrogen deposition impacts on Derwent Ings SSSI. This habitat has a Critical Load range of 20		

			– 30 kgN/ha/yr. A Critical Load of 20 kgN/ha/yr has been used for the purposes of the air quality modelling. 'Moss and lichen dominated mountain summits' and 'raised and blanket bogs', do not exist within or adjacent to Derwent Ings SSSI. As such, it is not appropriate to complete air quality modelling on the basis of these habitat types. Golden plover using Derwent Ings will be primarily associated with the flood plain (meadow) habitats present. APIS also identifies that freshwater habitats are a relevant habitat for a number of the bird species associated with the SSSI. APIS identifies that there is 'no comparable habitat with established critical load class'. APIS goes on to state, in relation to this habitat type that 'These systems are often P [phosphorous] limited (or N [nitrogen] /P co-limiting), therefore decisions should be taken at a site specific level…'. A Technical Note was produced investigating N/P limitation of the River Derwent and River Ouse for the Drax Repower Scheme, which is provided as Appendix 6 of the HRA Report (document reference 6.8.3.6). The work reported in this Technical Note identified that both the River Derwent and the River Ouse were P-limited rather than N-limited. That is to say, the ratio of N:P in each river suggested that additional inputs of nitrogen would have a very limited effect, as phosphorous was the limiting macronutrient. In light of the above, the use of a 20 kgN/ha/yr Critical Load remains appropriate. The analysis for Lower Derwent Valley SAC and Ramsar is therefore also considered applicable to Derwent Ings SSSI. Therefore, no perceptible ecological effects to SSSI site features are predicted. There is no air quality information for Lower Derwent Valley National Nature Reserve (NNR) available on the APIS website, as APIS does not hold information on any NNR. There is also no citation information for Lower Derwent Valley NNR which identifies specific interest features as are identified for the European Sites and SSSI. Within 15 km of the Main Stack, almost all of the Lower Derwent Valley NNR is within the boundary of the Lower Derwent Valley SAC / SPA and Ramsar, and therefore also within the Breighton Meadows and Derwent Ings SSSI (the Lower Derwent Valley NNR also overlaps with the boundaries of other SSSI, but these are all beyond 15 km from the Main Stack and therefore not relevant to the assessment of operational air quality effects). The assessment of effects on the Lower Derwent Valley SAC and Ramsar and Breighton Meadows and Derwent Ings SSSI are therefore considered applicable to Lower Derwent Valley NNR. Therefore, no perceptible effects to the NNR are predicted. Thorne, Crowle and Goole Moors SSSI, is an underpinning SSSI for Thorne Moor SAC and SPA. The Air Pollution Information System (APIS) (Air Pollution Information System, Undated) identifies no features of Thorne, Crowle, and Goole Moors SSSI as being more sensitive to air quality impacts than the SAC qualifying interests. As such, the analysis for Thorne Moor SAC also applies to Thorne, Crowle and Goole Moors SSSI.		

			Therefore, no perceptible ecological effects to SSSI site features are predicted. Barn Hill Meadows SSSI has Critical Loads assigned on APIS for 'low and medium altitude hay meadows'. These have a Critical Load range of 20-30 kgN/ha/yr. A conservative Critical Load of 20 kgN/ha/yr has therefore been used. There are two Critical Loads for acid deposition available, one for 'acid grassland', and one for 'calcareous grassland (using base cation)' (Air Pollution Information System, undated). The acid grassland Critical Load for acid deposition has been used, as this is the most sensitive to acid deposition and therefore is conservative. The air quality modelling for Barn Hill Meadows SSSI predicts no cumulative exceedance of the screening criterion for nitrogen deposition, with a maximum impact equivalent to 0.5% of Critical Load (see Table 1.17 in Appendix 5 (Operational Phase Results) of Volume 3 of the ES (document reference 6.3.6.5). The maximum modelled acid deposition rate is equivalent to 1.9% of Critical Load. The cumulative air quality impacts are not predicted to lead to perceptible ecological effects to Barn Hill Meadows SSSI. This is due to the low magnitude of the cumulative impact that has been modelled; the series of conservative assumptions underpinning the air quality modelling; evidence from literature reviews; and the significant overall reductions in emissions of SO2 from Drax Power Station (and other sources) as a contributor to acidification in recent decades. The detailed analysis of these factors is presented in Section 4.3 of the HRA Report (document reference 6.8.1), with these factors also relevant to Barn Hill Meadows SSSI. The air quality modelling for non-statutory designated sites identifies cumulative exceedances for nitrogen deposition for several Local Wildlife Sites (LWS) and Sites of Importance for Nature Conservation (SINC). Predicted impacts that exceed the 1% screening criterion for nitrogen deposition are as follows: ~ Common Plantation SINC – 1.7% of Critical Load; ~ Disused Railway Embankment SINC – 1.4% of Critical Load; ~ Barmby-On-The-Marsh LWS- 1.6% of Critical Load; ~ Cobble Croft Wood SINC – 1.6% of Critical Load; ~ Hagg Green Lane SINC – 1.9% of Critical Load; and ~ Sand Pitt Wood and Barffs Close Plantation SINC – 1.8% of Critical Load. The cumulative air quality impacts are not predicted to lead to perceptible effects to locally designated sites. This is due to the low magnitude of the cumulative impact that has been modelled; the series of conservative assumptions underpinning the air quality modelling, in particular assuming full load operation of all developments considered in the cumulative air quality modelling which in reality is extremely unlikely to occur; and		

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			evidence from literature reviews. The detailed analysis of these factors is presented in Section 4.3 of the HRA Report (document reference 6.8.1), with these factors also relevant to these SINCs and LWSs. In light of the above assessment, including consideration of Proposed Scheme mitigation measures, cumulative air quality effects on designated sites are predicted to be negligible and therefore neutral (not significant) during operation.		
3	2021/0450/SCP SEGL2 (Scotland to England Green Link 2) project	Scoping	Information has been obtained from the EIA Scoping report for Development ID 3. The western limit of the High Voltage Direct Current (HVDC) cable is at the eastern boundary of the existing Drax Power Station Site, with a convertor station proposed in an agricultural field to the east of New Road. There is a possible overlap with the Order Limits for the Proposed Scheme in the far east of the existing Drax Power Station Site, but this is not possible to confirm on the basis of the available information for Development 3. The HVDC cable would be installed under the River Ouse downstream of the confluence of Carr Dike (which flows under the existing Power Station Site) with the River Ouse. The convertor station would result in permanent landtake of habitats east of the existing Drax Power Station site and to the south of the Eastern Laydown Area. There would also be temporary loss, disturbance, and fragmentation of habitats for the HVDC cable. The permanent landtake for the convertor station and the temporary effects of construction for the HVDC cable could lead to disturbance / loss of habitats for protected and notable species. This could include temporary disturbance of fish, bird, and otter populations associated with designated sites within the ZoI of the Proposed Scheme, including National Network Sites and SSSI. Construction is predicted to take place between 2024 – 2031, so would overlap with proposed timescales for construction and operation of the Proposed Scheme. There is potential for significant cumulative effects on the following Important Ecological Features (IEF) during Construction: ~ Disturbance/disruption of bird and otter populations associated with European Sites and SSSI (including areas of habitat used by those species outside the boundaries of the designated sites); ~ Temporary loss and/or disturbance of minor watercourses for cable installation, with affected watercourses in the vicinity of the Proposed Scheme potentially used by the population of otters associated with the	The Applicant has proposed mitigation measures for predicted significant effects on IEF **Chapter 8**: **Ecology** (document reference 6.1.8) and embedded within the design of the Proposed Scheme. With these measures in place, the Proposed Scheme's effects on IEF are considered to be nugatory and could not contribute to significant cumulative effects on the following IEF during Construction or Operation: ~ Migratory fish species (lamprey) using the River Ouse, that are associated with the Humber Estuary SAC and Ramsar site and the River Derwent SAC; and ~ Otter, including those associated with the River Derwent SAC and other designated sites. Both the Proposed Scheme and Development 3 propose to deliver 10% Biodiversity Net Gain (BNG). It is considered that this will address any significant cumulative effects of temporary and permanent loss of IEF habitats. This enhanced habitat provision is also expected to address any cumulative Construction	Residual effects are predicted be non-significant during construction and operation for all IEF.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			River Derwent SAC and Lower Derwent Valley SAC and underpinning SSSIs; and ~ Loss and disturbance of farmland in the vicinity of the Proposed Scheme that could be used by wintering birds associated with the Lower Derwent Valley SPA and Ramsar and/or the Humber Estuary SPA and Ramsar and underpinning SSSI (functionally-linked land). The majority of habitat loss would be short term and temporary, associated with installation of the HVDC cable. There would be minor permanent habitat loss from the arable field where the convertor station would be located east of Drax Power Station. ~ Cumulative temporary IEF habitat loss, disturbance, and fragmentation; and ~ Additive disturbance of protected and notable species (not forming part of National Network Sites and SSSI populations), primarily bat and bird populations affected by construction of the Proposed Scheme and construction/operation of Development 3. There is potential for significant cumulative effects on the following IEF during Operation: ~ Permanent loss of habitat (arable farmland) at the site of the proposed convertor station additive with permanent habitat loss from the Proposed Scheme; ~ Permanent loss of habitat which may be used by wintering birds at the site of the proposed convertor station being additive with temporary loss of habitat for wintering birds associated with the Eastern Laydown Area; ~ Disturbance of protected and notable species (primarily bats and birds) by lighting associated with operation of the convertor station, being additive with operational lighting from the Proposed Scheme. The effects of the Proposed Scheme itself in terms of functionally-linked land that triggered LSE are very minor, comprising hedgerow planting within the Habitat Provision Area only. There would be no spatial overlap with Development 3. The hedgerow planting in the Habitat Provision Area is not predicted to lead to any material change in the suitability of this area for otter or SPA/Ramsar/SSSI bird species. In addition, mitigation has been proposed for the Proposed Scheme (see paragraph 4.1.4) that would require hedgerow planting in the Habitat Provision Area to be timed to be completed at the end of the wintering bird season (March in any calendar year).	disturbance and habitat loss/disruption on bats and birds (in-combination with standard good practice measures contained in each Project's CEMP). A Register of Environmental Actions and Commitments (REAC) has been produced for the Proposed Scheme **(**document reference 6.5). The actions and commitments within the REAC would be secured by a requirement in the DCO and would include a requirement for a Construction Environmental Management (CEMP) to be produced for the Proposed Scheme). The application for the Proposed Scheme is accompanied by a Lighting Strategy (document reference 6.7), which sets out measures to minimise adverse environmental effects of lighting on the environment. The Scoping Report for Development 3 also identifies the need for careful lighting design at the convertor station. With these measures in place significant cumulative lighting disturbance of bats and birds is expected to be mitigated.	

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			Depending on the detailed construction timings for Development 3 (which are not known, but would likely be between 2024 -– 2029), it is possible that the East Construction Laydown Area of the Proposed Scheme could be in use whilst construction activities for the Development 3 convertor station and adjacent sections of HVDC cable are ongoing / have been completed. This would increase the cumulative loss of farmland habitats to the east of the existing Drax Power Station. Should this potential overlap occur, it is considered unlikely to significantly worsen the effects of the Proposed Scheme alone on SPA / Ramsar / SSSI bird species. This is because; ~ The wintering bird surveys completed for the Proposed Scheme recorded no SPA/SSSI species in the East Construction Laydown Area; ~ The East Construction Laydown Area would be reinstated following construction, i.e., 2029 at the latest; and ~ The habitat enhancements proposed to the north of the East Construction Laydown Area (see Figure 1 of the Outline Landscape and Biodiversity Strategy (document reference 6.6.1) would increase the potential suitability of this area for SPA / Ramsar / SSSI bird species. In relation to otter, the Proposed Scheme will have very minor effects on functionally-linked land, that are not expected to materially affect use of that land by otter. These effects are therefore not expected to combine appreciably with those of Development 3, particularly given that the majority of Development 3's impacts would be temporary, associated with the HVDC cable route where crossing watercourses and adjoining land. It is assumed that Development 3 will complete appropriate pre-construction surveys for otter as part of the baseline environmental information gathering for that project. It is also assumed that Development 3 will implement standard good practice environmental mitigation, including the provision of an Ecological Clerk of Works for sensitive water crossings and if required micro-siting of the cable route to avoid key otter habitat features, e.g. holts if present.		
4	EN010114 Keadby 3 CCGT	Submitted, awaiting decision.	Construction: No cumulative effects are predicted during construction. Operation: Assessment as per Development ID 1 (Eggborough CCGT).	Construction: none required Operation: operational emissions control measures from the Proposed Scheme.	**Construction:** N/A **Operation**: Cumulative residual effects are

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
					expected to be neutral, not significant.
5	EN010094 Ferrybridge D CCGT	Scoping	Construction: No cumulative effects are predicted during construction. Operation: The only potential cumulative impact pathway identified is for increased cumulative air quality impacts on designated sites. The Air Quality modelling (see **Chapter 6** (Air Quality) of Volume 1 of the ES (document reference 6.1.6) identifies that no modelling data was available that could be used to model the effects of Development 5. As such this cannot be considered in the cumulative air quality modelling. Furthermore, it is noted that there is considerable uncertainty that development 5 will actually come forward, with development 5 having made no public announcements since 2018. Development 5 is therefore unlikely to be operational or consented (and thus itself requiring an in-combination assessment and judgement to be made) prior to operation of the Proposed Scheme.	Construction: none required Operation: operational emissions control measures from the Proposed Scheme.	**Construction:** N/A **Operation**: Cumulative residual effects are expected to be neutral, not significant.
6	NY/2022/0027/SCO Barlow Ash Mound, recovery of ash resource	Scoping	Development 6 involves proposals for the mining and reclamation of ash from the 'Barlow Mound'. Barlow Mound has been used and remains in use for the disposal of ash generated by combustion of biomass at the Drax Power Station Site. Following reclamation of ash, the site would be restored. Development 6 is located approximately 40m west of the Proposed Scheme. Barlow Mound is known to support a range of habitats and protected and notable species, having been subject to a long-term programme of ecological monitoring and management by Drax. An EIA Scoping Report has been submitted to SDC, but no assessment of the potential ecological effects of Development 6 is yet available other than identification of potential impact pathways and high level mitigation principles. As such it is not possible to assess cumulative effects on ecology in detail. The EIA Scoping Report for Development 6 identifies that mining of Barlow Mound would be ongoing for approximately twenty years followed by landscape and habitat restoration works. As such, there is potential for ash mining and restoration works to be ongoing during both construction and operation of the Proposed Scheme. Given the proximity of Development 6 to the Proposed Scheme with habitat connectivity between the two, cumulative ecological effects could arise between the two. Effects could be adverse, for example increased potential for disturbance and displacement of protected species. Equally, effects could be positive in the long term, through combined delivery of Biodiversity Net Gain. The potential for in-combination (cumulative) effects between Development 6 and the Proposed Scheme has been considered in **Section 4.3** of the Habitats Regulations Assessment Report (document reference 6.8.1) in	Provision of habitat creation and enhancement, as per the Outline Landscape and Biodiversity Strategy; Precautionary measures to minimise risk of incidental mortality and disturbance during construction, for badger, birds, bats, and reptiles; Implementation of mitigation measures by Development 6 (details TBC).	Construction: Residual effects are predicted to be significant at up to a District level Operation: Residual effects are predicted to be neutral.

			relation to European Sites. This predicts no adverse effects on the integrity of any European Site as set out below in the analysis of potential cumulative effects for European Sites and relevant underpinning SSSI. The effects of the Proposed Scheme itself in terms of functionally-linked land that triggered LSE as identified in the HRA Report are very minor, comprising hedgerow planting within the Habitat Provision Area only. There would be no spatial overlap with Development 6. The hedgerow planting in the Habitat Provision Area is not predicted to lead to any material change in the suitability of this area for otter or SPA/Ramsar/SSSI bird species. In addition, mitigation has been proposed for the Proposed Scheme (see paragraph 4.1.4) that would require hedgerow planting in the Habitat Provision Area to be timed to be completed at the end of the wintering bird season (March in any calendar year). Depending on the detailed construction timings for Development 6 (which are not known, but would likely be between 2024 - 2039), it is possible that the East Construction Laydown Area of the Proposed Scheme could be in use whilst construction activities for the Development 3 convertor station and adjacent sections of HVDC cable are ongoing / have been completed. This would increase the cumulative loss of farmland habitats to the east of the existing Drax Power Station. Should this potential overlap occur, it is considered unlikely to significantly worsen the effects of the Proposed Scheme alone on SPA / Ramsar / SSSI bird species. This is because; ~ The East Construction Laydown Area would be reinstated following construction, i.e., 2029 at the latest; and ~ The habitat enhancements proposed to the north of the East Construction Laydown Area (see Figure 1 of the Outline Landscape and Biodiversity Strategy (document reference 6.6.1) would increase the potential suitability of this area for SPA / Ramsar / SSSI bird species. It is also possible that the Proposed Scheme and Development 6 could lead to increased cumulative visual disturbance of SPA/Ramsar/SSSI bird species. The current red line boundary for Development 6 is shown on Figure 02 of the Development 6 EIA Scoping Report. The proposals for habitat measures in the Off-site Habitat Provision Area are shown on **Figure 1** of the **Outline Landscape and Biodiversity Strategy** (document reference 6.6.1). Based on these sources of information an existing band of dense scrub and tree cover would be maintained between the existing / proposed open habitats (i.e. grassland) in the off-site Habitat Provision Area and Development 6. This would provide visual screening between Development 6 and the Off-Site Habitat Provision Area. Barlow Mound is known to support a range of wildlife, having been subject to ecological monitoring by Drax for a number of years. Barlow Mound supports extents of woodland plantation and grassland habitats, with		

			hedgerows, waterbodies and scattered scrub also present. Barlow Mound also supports breeding and wintering birds, populations of water voles, and a large number of badger setts. A small population of grass snake has also been recorded. Surveys for great crested newts in 2021 found no evidence of the species. As set out in the EIA scoping report for Development 6, there is therefore the potential for ecological effects on these habitats and species during the proposed ash reclamation works. There is no potential for significant cumulative effects on water voles or great crested newts. In the case of water voles, this is because the Proposed Scheme is predicted to have no effects whatsoever on water voles. In the case of great crested newts, this is because the surveys for Development 6 found no evidence of great crested newts. The combined habitat loss arising from the Proposed Scheme and Development 6 would be greater than the habitat loss arising from either development alone. As such there is the potential for cumulative effects to be more significant than those of either development alone. The Proposed Scheme includes a habitat creation and enhancement measures to address habitat loss and support the delivery of biodiversity net gain, as set out on **Figure 1** of the **Outline Landscape and Biodiversity Strategy** (document reference 6.6.1). Cumulative habitat loss arising from the Proposed Scheme combined with Development 6 is predicted to remain significant at a local scale during construction, but with the impacts of the Proposed Scheme becoming non-significant as created and enhanced habitats mature during the operational stage. There is limited potential for cumulative impacts on grass snake (or other reptile) populations recorded at Development 6, in the event that these also make use of habitats in the north of the Drax Power Station Site. The mitigation measures for the Proposed Scheme, as set out in **Section 8.10** of **Chapter 8** (Ecology) of Volume 1 of the ES (document reference 6.1.8) would provide appropriate mitigation for the Proposed Scheme. Providing Development 6 implements suitable mitigation measures in relation to the known population of grass snakes, significant cumulative effects should be avoided. There is also potential for cumulative effects on populations of bats and breeding and wintering birds (species not qualifying interests of statutory designated sites). Effects could arise due to the combined effects of loss of habitats and noise and visual disturbance from the Proposed Scheme and Development 6, should construction of the Proposed Scheme coincide with implementation of Development 6. These effects are considered to remain significant at up to a District scale (birds) and Local scale (bats) during construction. With implementation of the mitigation measures for bats and breeding and wintering birds, as set out in Section 8.10 of Chapter 8 (Ecology) of Volume 1 of the ES (document reference 6.8.1), the effects of		

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			the Proposed Scheme are predicted to be positive at a Local level, for both bats and breeding and wintering birds. As such, there is no prospect of the Proposed Scheme contributing to negative cumulative effects on bat and bird populations during operation.		
9	2021/0348/SCN 5 Wind turbines	Screening Opinion Request	Development 9 would involve the erection and subsequent operation of five wind turbines. Development 9 is located approximately 1.9km west of the Proposed Scheme. An EIA Screening request was issued to SDC in March 2021, with SDC issuing an EIA Screening Opinion in June 2021 confirming an ES is required. The response from the NYCC Planning Ecologist identifies that they consider Development 9 needs to consider potential impacts on bird species associated with designated sites including the Lower Derwent Valley SPA / Ramsar and other SPA sites. The NYCC ecologist identifies that a shadow HRA and bird survey information should be submitted with any planning application for Development 9. No other environmental information was available for Development 9. Development 9 will be located approximately 1.9 km from the Proposed Scheme and may affect bird populations associated with designated sites in the ZoI of the Proposed Scheme. It could therefore potentially contribute to cumulative ecological effects on these receptors with the Proposed Scheme. Given the distance between Development 9 and the Proposed Scheme (1.9 km), Development 9 is not predicted to lead to any displacement of birds from areas of land within or adjacent to the Proposed Scheme, where displacement from the Proposed Scheme could take place. As such, effects would be spatially separated. There is however potential for effective loss of farmland habitats that could be used by wintering birds associated with the Lower Derwent Valley SPA and Ramsar and/or the Humber Estuary SPA and Ramsar, due to displacement of those birds in response to the presence of wind turbines. Such effects could be additive, if the same SPA/Ramsar/SSSI birds were subject to displacement from the Proposed Scheme and Development 9 (although given the intervening distance between Development 9 and the Proposed Scheme, there is a low risk of occurrence). Depending on the detailed construction timings for Development 9 (which are completely unknown), it is possible that the East Construction Laydown Area of the Proposed Scheme could be in use whilst construction and	Provision of habitat creation and enhancement, as per the **Outline Landscape and Biodiversity Strategy;**	Residual effects are predicted be non-significant during construction and operation for all IEF.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			operation of Development 9 is ongoing. This would increase the cumulative loss of farmland habitats in the area. Should this potential overlap occur, it is considered unlikely to significantly worsen the effects of the Proposed Scheme alone on SPA / Ramsar bird species. This is because; ~ The wintering bird surveys completed for the Proposed Scheme recorded no SPA/SSSI species in the East Construction Laydown Area; ~ The distance between Development 9 and The Proposed Scheme; ~ The East Construction Laydown Area would be reinstated following construction, i.e., 2029 at the latest; and ~ The habitat enhancements proposed to the north of the East Construction Laydown Area (see Figure 1 of the Outline Landscape and Biodiversity Strategy (document reference 6.6.1) would increase the potential suitability of this area for SPA/Ramsar/SSSI bird species. With the mitigation measures to be implemented as part of the Proposed Scheme, cumulative effects are not predicted to arise.		
10	2021/0788/EIA Ground-mounted solar farm	Submitted, awaiting decision	Development 10 involves the construction of a new solar farm across a 112ha site located approximately 1 km from the Proposed Scheme. The response from the NYCC Ecologist to the planning application states that they are confident that significant effects on the River Derwent SAC / SSSI can be ruled out, and that no further assessment under the Conservation of Habitats and Species Regulations (2017, as amended) is needed. On this basis, and given the scale and location of Development 10, there is considered to be no prospect of cumulative effects on statutory designated sites. Timescales for the construction of Development 10 are not clear, but is expected to take approximately six months. As such there is some limited potential for overlapping effects of construction of Development 10 with construction of the Proposed Scheme. If Development 10 is granted planning permission, it is likely it would be operational for much if not all of the operational period of the Proposed Scheme. The response from the NYCC Ecologist to the planning application for Development 10 states that they are satisfied that the Ecological Impact Assessment submitted addresses most of their concerns regarding ecological impacts and effects. They do however state that they remain concerned about impacts on farmland birds arising from loss of habitat to the solar array and associated infrastructure. The NYCC Ecologist	Arable habitats supporting farmland birds that will be temporarily lost during construction will be reinstated, with enhancements, following construction. Both the Proposed Scheme and Development 10 propose to deliver Biodiversity Net Gain (BNG). It is considered that this will address any significant cumulative effects of temporary and permanent loss of IEF habitats. This enhanced habitat provision is also expected to address any cumulative construction disturbance and habitat loss / disruption on farmland birds (in-combination with standard good practice measures contained in each Project's CEMP) between the Proposed Scheme and Development 10. Assuming the	Residual effects are predicted be non-significant during construction and operation for all IEF.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			proposes a series of planning conditions to address this, and to secure mitigation measures for other ecological features. There is potential for significant cumulative effects on the following Important Ecological Features (IEF) during Construction: ~ Additive disturbance and habitat loss for breeding and wintering birds. There is no potential for significant cumulative effects during Operation, as the Proposed Scheme will result in negligible to no permanent loss of arable habitat. Given the Proposed Scheme will not cause permanent loss of habitats supporting farmland birds, it will not generate impacts that could be cumulative with the loss of farmland bird habitat arising from Development 10.	recommended conditions provided by the NYCC Ecologist in their response to the Development 10 planning application are adopted, mitigation for that projects impacts will be secured.	
12	2020/0994/FULM FGD Plant Demolition, Drax	Permitted development	Development 12 involves the demolition of existing flue gas desulphurisation infrastructure within the existing Drax Power Station Site. Demolition activities will overlap spatially with the Proposed Scheme, and may be taking place during the early phase of the Construction of the Proposed Scheme (Development 12 is expected to be completed by 2027). As such Development 12 could be being implemented during construction of the Proposed Scheme, but is expected to be materially complete by the time the Proposed Scheme enters its operational phase. There are limited prospects for cumulative ecological effects, as Development 12 is located almost entirely within areas of buildings and hard-standing. There is potential for significant cumulative effects on the following IEF during construction: ~ Additive temporary IEF habitat loss, disturbance, and fragmentation; and ~ Additive disturbance of protected and notable species, potentially including low numbers of birds associated with nearby designated sites. There is no potential for cumulative effects during Operation as Development 12 is a demolition-only project, with no operational activities.	The Proposed Scheme proposes to deliver 10% Biodiversity Net Gain (BNG). Condition 08 of the Planning Permission for Development 12 requires a Method Statement to address any minor habitat loss caused by that development to be produced. This is to be provided to and approved by the Local Planning Authority (SDC). It is considered that the measures proposed by Development 12 will address any significant cumulative effects on habitats. The mitigation measures proposed during construction for the Proposed Scheme, in particular the requirement for 2.4 m solid hoarding to be installed around construction areas (see **row E1** in **Table 1.1** of the Register of Environmental Actions and Commitments (document reference 6.5) will provide screening between the Proposed Scheme and habitats that may be used by sensitive species,	Residual effects are predicted be non-significant during construction for all IEF.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
				mitigating potential in-combination effects during construction of the Proposed Scheme.	
47	20/01774/TIPA Land North West Of Sandall Stones Road Kirk Sandall Doncaster DN3 1QR	Submitted, awaiting decision.	**Construction**: No cumulative effects are predicted during construction. **Operation**: As per the assessment presented for ID1 (Eggborough CCGT).	Construction: none required Operation: operational emissions control measures from the Proposed Scheme.	**Construction:** N/A **Operation**: Cumulative residual effects are expected to be neutral, not significant.
74	Unknown Keadby 2 Power Station	Consented, included in Keadby 3 baseline.	**Construction**: No cumulative effects are predicted during construction. **Operation**: As per the assessment presented for ID1 (Eggborough CCGT).	Construction: none required Operation: operational emissions control measures from the Proposed Scheme.	**Construction:** N/A **Operation**: Cumulative residual effects are expected to be neutral.
Landscape and Visual Impact					
3	2021/0450/SCP Scotland to England Green Link 2 Project	Scoping	**Construction:** As discussed in **Chapter 9 (Landscape and Visual Impact)** (document reference 6.1.9), the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Moderate Adverse (Significant)** on Common Visual receptors. The common LCAs (Site Fabric and Camblesforth Farmlands LCA) and visual receptors (residents in the vicinity of Camblesforth, Drax and footpath users) will experience construction activities associated with the sub-station in addition to those of the Proposed Scheme. In combination there will be an increase in localised effects along New Road due to the construction activities associated with the cumulative site. Overall, the highest level of the anticipated cumulative effects is **Minor Adverse (Not significant)** on Common Landscape receptors as the increase in infrastructure will be within the context of Drax Power Station and **Moderate Adverse (Significant)** on Common Visual receptors due to the noticeable construction activity associated with large scale infrastructure within the view. **Operation:** As discussed in **Chapter 9 (Landscape and Visual Impact),** the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on	Retention of existing vegetation during construction wherever practicable. No mitigation measures required for operation.	**Construction:** **Minor Adverse (Not significant)** on Common Landscape receptors **Moderate Adverse (Significant)** on Common Visual receptors **Operation:** **Minor Adverse (Not significant)** on Common Landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors. The common LCAs (Site Fabric and Camblesforth Farmlands LCA) and visual receptors (residents in the vicinity of Camblesforth, Drax and nearby footpath users) will experience operational activities associated with the sub-station in addition to those of the Proposed Scheme. In combination there will be an increase in localised effects along New Road within the setting of Drax Power Station, with the cumulative site extending the influence of large scale infrastructure within the area. Overall, the highest level of the anticipated cumulative effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors.		
6	NY/2022/0027/SCO Barlow Ash Mound, North West of Drax Power Station	Scoping	**Construction:** As discussed in **(Chapter 9: Landscape and Visual Impact),** the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse** (**Not Significant**) on Common Landscape receptors and **Moderate Adverse** (**Significant**) on Common Visual receptors. The common LCA (Camblesforth Farmlands LCA) and visual receptors (residents with south-eastern facing views and footpath users) will experience construction activities associated with the mining in addition to those of the Proposed Scheme. In combination there will be an increase in localised effects to the west of Drax Power Station due to the construction activities associated with the cumulative site. Overall, highest level of the anticipated cumulative effects is **Minor Adverse** (**Not Significant**) on Common Landscape receptors and **Moderate Adverse** (**Significant**) on Common Visual receptors as the Proposed Scheme will be viewed in the background beyond the activities associated with this cumulative site. **Operation:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors. The common LCA (Camblesforth Farmlands LCA) and visual receptors (residents with south-eastern facing views and footpath users) will experience construction activities associated with the mining in addition to those of the Proposed Scheme. In combination there will be an increase in localised effects to the west of Drax Power Station Road due to the operational activities associated with the cumulative site. Overall, highest level of the anticipated cumulative effects is **Minor Adverse (Not**	During construction, retention of existing vegetation during construction wherever practicable. No mitigation required for operation.	**Construction:** **Minor Adverse (Not Significant)** on Common Landscape receptors **Moderate Adverse (Significant)** on Common Visual receptors **Operation:** **Minor Adverse (Not significant)** on Common Landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			significant) on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors		
7	2021/0120/FULM Development of a Horticultural Facility for indoor farming and agri-tech	Permitted development	**Construction** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not Significant)** on Common Landscape receptors and **Minor Adverse (Not Significant)** on Common Visual receptors. The common LCA (Camblesforth Farmlands LCA) and visual receptors (residents of Camblesforth, and footpath users) will experience construction activities in addition to those of the Proposed Scheme. In combination there will be increase in localised effects for a small number of receptors near Brigg Lane in Camblesforth. It is anticipated effects will remain **Minor Adverse (Not Significant)** on Common Landscape receptors and **Minor Adverse (Not Significant)** on Common Visual receptors **Operation:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors. The common LCA (Camblesforth Farmlands LCA) and visual receptors (residents of Camblesforth, and footpath users) will experience operational activities in addition to those of the Proposed Scheme. In combination there will be increase in localised effects for a small number of receptors near Brigg Lane in Camblesforth. It is anticipated effects will remain **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors.	No mitigation measures required for construction. No mitigation measures required for operation.	**Construction:** **Minor Adverse (Not Significant)** on Common Landscape receptors **Minor Adverse (Not Significant)** on Common Visual receptors. **Operation:** **Minor Adverse (Not significant)** on Common landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors.
8	2020/1357/FULM Development of an energy storage facility, Land off New Road, Drax	Permitted development	**Construction:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not Significant)** on Common Landscape receptors and **Moderate Adverse (Significant)** on Common Visual receptors. The committed development is the construction and operation of an energy storage facility located off New Road and will see construction activities within the Camblesforth LCA in combination with the Proposed Scheme by shared visual receptors (residents with south western facing views,	Retain and enhance existing vegetation to the eastern boundary of the Laydown Area. No mitigation measures required for operation.	**Construction:** **Minor Adverse (Significant)** on Common Landscape receptors **Moderate Adverse (Significant)** on Common Visual receptors **Operation:**

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			residents of Drax village and footpath users). In combination there will be an increase in localised effects along New Road, overall, it is anticipated effects will remain **Minor Adverse (Not Significant)** on Common Landscape receptors and **Moderate Adverse (Significant)** on Common Visual receptors. **Operation:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors. The committed development is the construction and operation of an energy storage facility located off New Road and will see operational activities within the Camblesforth LCA in combination with the Proposed Scheme by shared visual receptors (residents with south western facing views, residents of Drax village and footpath users). In combination there will be an increase in localised effects along New Road, overall it is anticipated effects will remain **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors.		**Minor Adverse (Not significant)** on Common Landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors.
9	2021/0348/SCN Five wind turbines	Screening request	**Construction:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors The common LCA (Ouse Valley) and visual receptors (footpath users and recreational users of the River Ouse) will experience construction activities in addition to those of the Proposed Scheme. Due to the distance between the Proposed Scheme and this cumulative site, and the opposing direction of view for visual receptors, it is anticipated effects will remain **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors. **Operation:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on	No mitigation measures required for construction. No mitigation required for operation.	**Construction:** **Minor Adverse (Not significant)** on Common Landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors. **Operation:** **Minor Adverse (Not significant)** on Common Landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors. The common LCA (Ouse Valley) and visual receptors (footpath users and recreational users of the River Ouse) will experience operational activities in addition to those of the Proposed Scheme. Due to the distance between the Proposed Scheme and this cumulative site, and the opposing direction of view for visual receptors, it is anticipated that the Sites are unlikely to be viewed within the same view, therefore effects will remain **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors.		
10	2021/0788/EIA Development of a ground-mounted solar farm	Submitted, not decided	**Construction:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Moderate Adverse (Significant)** on Common Visual receptors The common LCA (Camblesforth Farmlands) and visual receptors (residents of Camblesforth and footpath users) will experience construction activities in addition to those of the Proposed Scheme. Low level construction works associated with cumulative site will be visible in the foreground with views of the Proposed Scheme visible in the background within the context of Drax Power Station amongst the skyline. In combination there will be an increase in localised effects, it is anticipated effects will remain **Minor Adverse (Not significant)** on Common Landscape receptors and **Moderate Adverse (Significant)** on Common Visual receptors **Operation:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors. The common LCA (Camblesforth Farmlands) and visual receptors (residents of Camblesforth and footpath users) will experience operational activities due to the replacement of open farmland with the cumulative site in addition to the introduction of the Proposed Scheme within the context of Drax Power Station. In combination there will no discernible increase in localised effects, it is anticipated effects will remain **Minor Adverse (not**	No mitigation required for construction. No mitigation required for operation.	**Construction:** **Minor Adverse (Not significant)** on Common Landscape receptors **Moderate Adverse (Significant)** on Common Visual receptors **Operation:** **Minor Adverse (Not significant)** on Common Landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			significant) on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors.		
12	2020/0994/FULM Drax Demolition of Flue Gas Desulphurisation (FGD) Plant	Permitted development	**Construction:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Moderate Adverse (Significant)** on Common Visual receptors The common LCA (Site Fabric and Camblesforth Farmland) and visual receptors (residents of nearby village and footpath users) will experience construction activities in addition to those of the Proposed Scheme. In combination there will be an increase in localised effects, it is anticipated effects will remain **Minor Adverse (Not significant)** on Common Landscape receptors and **Moderate Adverse (Significant)** on Common Visual receptors. **Operation:** N/A – it is assumed that this cumulative site will be demolished prior to the Proposed Scheme becoming operational.	No additional mitigation measures required for construction.	**Construction:** **Minor Adverse (Not significant)** on Common Landscape receptors **Moderate Adverse (Significant)** on Common Visual receptors **Operation:** **N/A**
49	2021/1089/FULM Development of a battery storage facility	Submitted, not decided	**Construction:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors The common LCA (Camblesforth Farmlands) and visual receptors (residents in Drax village, Carlton and footpath users) will experience construction activities in addition to those of the Proposed Scheme. In combination there will be increase in localised effects for these receptors, it is anticipated effects will remain **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor Adverse (Not significant)** on Common Visual receptors **Operation:** As discussed in **Chapter 9 (Landscape and Visual Impact)**, the Scheme will have a range of adverse effects on Landscape and Visual receptors. The highest level of effects is **Minor Adverse (Not significant)** on Common Landscape receptors and **Negligible (Not significant)** on Common Visual receptors.	No mitigation measures required for construction. No mitigation measures required for operation.	**Construction:** **Minor Adverse (Not significant)** on Common Landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors **Operation:** **Minor Adverse (Not significant)** on Common Landscape receptors **Minor Adverse (Not significant)** on Common Visual receptors.

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			The common LCA (Camblesforth Farmlands) and visual receptors (residents in Drax village, Carlton and footpath users) will experience operational activities in addition to those of the Proposed Scheme. In combination there will be an increase in localised effects, it is anticipated however effects will remain **Minor Adverse (Not significant)** on Common Landscape receptors and **Minor adverse (Not significant)** on Common Visual receptors.		
Heritage					
3	2021/0450/SCP SEGL2 (Scotland to England Green Link 2) project	Scoping	**Construction:** Construction activities associated with the committed development would temporarily impact on the setting of above ground heritage assets through an increase in levels of noise, light and dust pollution. Given the scale of the committed development, these effects are not anticipated to a significant increase of effect compared to the Scheme in isolation. **Operation**: It is anticipated that all impacts to setting of above ground heritage assets would take place during the construction of the committed development as the cable will be buried underground.	None Required	**Construction**: Negligible adverse effect on above Ground Heritage Assets **Operation**: N/A
6	NY/2022/0027/SCO Barlow Mound recovery of ash resource	Scoping	**Construction:** Construction activities associated with the committed development would impact on the setting of above ground heritage assets through an increase in levels of noise, light and dust pollution. Given the nature of the recovery works and sympathetic restoration these effects are not anticipated to result in a significant increase of effect compared to the Scheme in isolation. **Operation:** The committed development would retain the external elements of the mound maintaining the current mound which screens many above ground heritage assets to west from the Proposed Scheme. Due to this any cumulative impacts and resultant adverse effects are not considered to be significant.	None Required	**Construction**: Negligible adverse effect on above Ground Heritage Assets **Operation**: None
9	2021/0348/SCN Five wind turbines	Screening request	**Construction**: Construction activities associated with the committed development would temporarily impact on the setting of above ground heritage assets through possible views of the construction works on the skyline, including movement of any high-level machinery such as cranes. Due to the distance from the Proposed Scheme, there is unlikely to be an additional increase in	None Required	**Construction**: Negligible adverse effect on above Ground Heritage Assets **Operation**: Slight adverse effect on the setting of

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			noise or light pollution that would be a considerable change from the current level. These effects are not anticipated to result in a significant increase of effect compared to the Proposed Scheme in isolation. **Operation**: There would be limited long distance views of the development due to topography of Barlow Mound, intervening vegetation and built form. The intervisibility between the Proposed Scheme and this development is limited however there would be a slight adverse impact resulting in a slight adverse effect on the setting of above ground heritage assets in the area.		above Ground Heritage Assets
Water Environment					
3	2021/0450/SCP SEGL2 (Scotland to England Green Link 2) project	Scoping	**Construction**: Surface water: Should there be overlap between construction of SEGL2 and Drax BECCS there is the potential for short term, temporary moderate adverse impact from increased sediment load and pollutants from accidental spillages and leakage of oil, hydrocarbons and hazardous substances generated from both sites on the local drains and eventually the River Ouse. **Operation**: Surface water: There is potential for long term, permanent moderate adverse impact from increased risk of flooding to Drax Power Station, employees and people and properties elsewhere due to increased impermeable area on both sites which would increase surface water runoff generated in the area. Furthermore, there is potential for long term, permanent major adverse impact from increased risk of flooding to Drax Power Station, employees and people and properties elsewhere due to loss of floodplain storage as a result of construction of the Proposed Scheme in the future floodplain (i.e. including for the impacts of climate change).	**Construction:** Implementation of CEMP, including preparation of Method Statements for construction works as discussed in **Section 12.10 of Chapter 12 (Water Environment**) (document reference 6.1.12) of this ES. **Operation:** Implementation of surface water drainage strategy as per **Appendix 12.3 Surface Water Drainage Strategy** (document reference 6.3.12.3). Floodplain compensation will be provided as per **Appendix 12.1 Flood Risk Assessment** (document reference: 6.3.12.1).	**Construction**: Risk of pollution to local drains and River Ouse: temporary, direct / indirect, short term **slight adverse (not significant)** **Operation**: Risk of flooding due to increased surface water runoff: **Neutral (not significant)** Risk of flooding due to reduction of the existing floodplain storage: **Neutral (not significant)**
3	2021/0450/SCP SEGL2 (Scotland to England Green Link 2) project	Scoping	**Construction:** Groundwater- should there be overlap between construction of these two developments there is the potential for a short term, temporary moderate adverse impact of pollution to the groundwater environment from accidental spillages and leakage of oil, hydrocarbons and hazardous substances **Operation:** Groundwater- there is potential for a long term, permanent moderate adverse impact of pollution to the groundwater environment. This	**Construction:** Compliance with CEMP (and additionally mitigation from surface water pollution prevention) **Operation:**	**Construction**: Temporary, Direct, Short Term, **Slight Adverse (not significant)** **Operation**: **Neutral (not significant).**

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			is from the accidental spillages or leakage of oil, hydrocarbons and hazardous substances used or storage during the operational phase infiltrating to groundwater via surface runoff.	Implementation of surface water drainage strategy as per **Appendix 12.3 Surface Water Drainage Strategy**.	
6	NY/2022/0027/SCO Barlow Mound recovery of ash resource	Submitted, not decided	**Construction** Surface water: Should there be overlap between construction of Barlow Ash Mound Scheme and Drax BECCS there is the potential for short term, temporary moderate adverse impact from increased sediment load and pollutants from accidental spillages and leakage of oil, hydrocarbons and hazardous substances generated from both sites on the local drains and eventually Carr Dyke and the River Ouse. **Operation Surface water:** There is potential for long term, permanent moderate adverse impact from increased risk of flooding to Drax Power Station, employees and people and properties elsewhere due to increased impermeable area on both sites which would increase surface water runoff generated in the area. Furthermore, there is potential for long term, permanent major adverse impact from increased risk of flooding to Drax Power Station, employees and people and properties elsewhere due to loss of floodplain storage as a result of construction of the Proposed Scheme in the future floodplain (i.e. including for the impacts of climate change).	**Construction:** Implementation of CEMP, including preparation of Method Statements for construction works as discussed in **Section 12.10** of the ES. **Operation:** Implementation of surface water drainage strategy as per **Appendix 12.3 Surface Water Drainage Strategy**. Floodplain compensation will be provided as per **Appendix 12.1 Flood Risk Assessment**.	**Construction:** Risk of pollution to local drains, Carr Dyke and River Ouse: temporary, direct / indirect, **short term slight adverse (not significant)** **Operation:** Risk of flooding due to increased surface water runoff: **Neutral (not significant)** Risk of flooding due to reduction of the existing floodplain storage associated with the Proposed Scheme and potential creation of additional floodplain storage in the Barlow Mound area**: Minor Beneficial / Neutral (not significant)**
6	NY/2022/0027/SCO Barlow Mound recovery of ash resource	Scoping	**Construction**: Groundwater- should there be overlap between construction of these two developments there is the potential for a short term, temporary moderate adverse impact of pollution to the groundwater environment from accidental spillages and leakage of oil, hydrocarbons and hazardous substances **Operation**: Groundwater- there is potential for a long term, permanent moderate adverse impact of pollution to the groundwater environment. This is from the accidental spillages or leakage of oil, hydrocarbons and hazardous substances used or storage during the operational phase infiltrating to groundwater via surface runoff.	**Construction:** Compliance with CEMP (and additionally mitigation from surface water pollution prevention) **Operation**: Implementation of surface water drainage strategy as per **Appendix 12.3 Surface Water Drainage Strategy**	**Construction**: Temporary, Direct, Short Term, **Slight Adverse (not significant)** **Operation**: **Neutral (not significant)**

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
7	2021/0120/FULM Development of an existing horticultural facility for indoor farming	Submitted, not decided	**Construction & Operation**: Surface water – scoped out of the Cumulative Assessment.	n/a	n/a
7	2021/0120/FULM Development of an existing horticultural facility for indoor farming	Permitted development	**Construction**: Groundwater- should there be overlap between construction of these two developments there is the potential for a short term, temporary moderate adverse impact of pollution to the groundwater environment from accidental spillages and leakage of oil, hydrocarbons and hazardous substances **Operation**: Groundwater- there is potential for a long term, permanent moderate adverse impact of pollution to the groundwater environment. This is from the accidental spillages or leakage of oil, hydrocarbons and hazardous substances used or storage during the operational phase infiltrating to groundwater via surface runoff	**Construction**: Compliance with CEMP (and additionally mitigation from surface water pollution prevention) **Operation**: Implementation of surface water drainage strategy as per **Appendix 12.3 Surface Water Drainage Strategy**.	**Construction**: Temporary, Direct, Short Term, **Slight Adverse (not significant)** **Operation**: **Neutral (not significant)**
8	2020/1357/FULM Development of an energy storage facility	Permitted development	**Construction**: Surface water: Should there be overlap between construction of these two developments there is the potential for short term, temporary moderate adverse impact from increased sediment load and pollutants from accidental spillages and leakage of oil, hydrocarbons and hazardous substances generated from both sites on the local drains and eventually the River Ouse. **Operation**: Surface water – There is potential for long term, permanent moderate adverse impact from increased risk of flooding to Drax Power Station, employees and people and properties elsewhere due to increased impermeable area on both sites which would increase surface water runoff generated in the area. Furthermore, there is potential for long term, permanent major adverse impact from increased risk of flooding to Drax Power Station, employees and people and properties elsewhere due to loss of floodplain storage as a result of construction of the Proposed Scheme in the existing floodplain.	**Construction:** Implementation of CEMP, including preparation of Method Statements for construction works as discussed in **Section 12.10** of the ES. **Operation:** Implementation of surface water drainage strategy as per **Appendix 12.3 Surface Water Drainage Strategy**. Floodplain compensation will be provided as per **Appendix 12.1 Flood Risk Assessment**.	**Construction**: Risk of pollution to local drains and River Ouse: temporary, direct / indirect, short term **slight adverse (not significant)** **Operation**: Risk of flooding due to increased surface water runoff: **Neutral (not significant)** Risk of flooding due to reduction of the existing floodplain storage: **Neutral (not significant)**
8	2020/1357/FULM Development of an energy storage facility	Permitted development	**Construction**: Groundwater- should there be overlap between construction of these two developments there is the potential for a short term, temporary moderate adverse impact of pollution to the groundwater environment from	**Construction:** Compliance with CEMP (and additionally mitigation from surface water pollution prevention) **Operation**: Implementation of surface water drainage strategy	**Construction**: Temporary, Direct, Short Term, **Slight Adverse (not significant)** **Operation**: **Neutral (not significant)**

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
			accidental spillages and leakage of oil, hydrocarbons and hazardous substances **Operation**: Groundwater- there is potential for a long term, permanent moderate adverse impact of pollution to the groundwater environment. This is from the accidental spillages or leakage of oil, hydrocarbons and hazardous substances used or storage during the operational phase infiltrating to groundwater via surface runoff	as per **Appendix 12.3 Surface Water Drainage Strategy**.	
49	2021/1089/FULM Development of a battery storage facility	Submitted, not decided	**Construction & Operation**: Surface water – scoped out of the Cumulative Assessment.	n/a	n/a
49	2021/1089/FULM Development of a battery storage facility	Submitted, not decided	**Construction**: Groundwater- should there be overlap between construction of these two developments there is the potential for a short term, temporary moderate adverse impact of pollution to the groundwater environment from accidental spillages and leakage of oil, hydrocarbons and hazardous substances **Operation**: Groundwater- there is potential for a long term, permanent moderate adverse impact of pollution to the groundwater environment. This is from the accidental spillages or leakage of oil, hydrocarbons and hazardous substances used or storage during the operational phase infiltrating to groundwater via surface runoff	**Construction**: Compliance with CEMP (and additionally mitigation from surface water pollution prevention) **Operation**: Implementation of surface water drainage strategy as per **Appendix 12.3 Surface Water Drainage Strategy**	**Construction**: Temporary, Direct, Short Term, **Slight Adverse (not significant)** **Operation**: **Neutral (not significant)**
Population, Health and Socioeconomics					
3	2021/0450/SCP SEGL2 (Scotland to England Green Link 2) project	Scoping	**Construction:** There is likely to be a temporary **slight (not significant) beneficial** socio-economic effect associated with direct construction employment generated by the Proposed Scheme and ID3. Similarly, multiple effects are anticipated in terms of the sourcing of local supplies (indirect employment across wider supply chains), and local spend by on-site workers (induced employment). There may be temporary **slight (not significant) adverse** effects on increased demand for accommodation and community facilities, and access to development land and businesses. **Operation:** There is likely to be a permanent **slight (not significant) beneficial** socio-economic effect associated with direct employment, indirect employment, and induced employment from both the Proposed Scheme and ID3.	N/A	**Construction:** Slight beneficial (not significant) Slight adverse (not significant) **Operation:** Slight beneficial (not significant)

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
6	NY/2022/0027/SCO Barlow Ash Mound, North West of Drax Power Station, New Road, Drax, Selby, YO8 8PH	Scoping	**Construction:** There is likely to be a temporary **slight (not significant) beneficial** socio-economic effect associated with direct temporary construction employment generated by the Proposed Scheme and ID6. Similarly, multiple effects are anticipated in terms of the sourcing of local supplies (indirect employment across wider supply chains), and local spend by on-site workers (induced employment). There may be temporary **slight (not significant) adverse** effects on increased demand for accommodation and community facilities, and access to development land and businesses. **Operation:** There is likely to be a permanent **slight (not significant) beneficial** socio-economic effect associated with direct employment, indirect employment, and induced employment from both the Proposed Scheme and ID6.	N/A	**Construction:** Slight beneficial (not significant) Slight adverse (not significant) **Operation:** Slight beneficial (not significant)
8	2020/1357/FULM Land Off New Road Drax Selby North Yorkshire	Permitted development	**Construction:** There is likely to be a temporary **slight (not significant) beneficial** socio-economic effect associated with direct temporary employment generated by the Proposed Scheme and ID8. Similarly, multiple effects are anticipated in terms of the sourcing of local supplies (indirect employment across wider supply chains), and local spend by on-site workers (induced employment). There may be temporary **slight (not significant) adverse** effects on increased demand for accommodation and community facilities, and access to development land and businesses. **Operation:** There is likely to be a permanent **slight (not significant) beneficial** socio-economic effect associated with direct employment, indirect employment, and induced employment from both the Proposed Scheme and ID8.	N/A	**Construction:** Slight beneficial (not significant) Slight adverse (not significant) **Operation:** Slight beneficial (not significant)

Short List ID	Application Reference	Project Stage	Assessment of Cumulative Impact with Proposed Development (Drax BECCS)	Proposed Mitigation Applicable to Drax BECCS Including Any Apportionment	Residual Cumulative Effect
12	2020/0994/FULM Drax Power Station New Road Drax Selby North Yorkshire YO8 8PQ	Permitted development	**Construction:** There is likely to be a temporary **slight (not significant) beneficial** socio-economic effect associated with direct temporary construction employment generated by the Proposed Scheme and ID12. In addition, multiple effects are anticipated in terms of the sourcing of local supplies (indirect employment across wider supply chains), and local spend by on-site workers (induced employment). There may be temporary **slight (not significant) adverse** effects on increased demand for accommodation and community facilities, and access to development land and businesses. **Operation:** There is likely to be a permanent **slight (not significant) beneficial** socio-economic effect associated with direct employment, indirect employment, and induced employment from both the Proposed Scheme and ID12.	N/A	**Construction:** Slight beneficial (not significant) Slight adverse (not significant) **Operation:** Slight beneficial (not significant)
49	2021/1089/FULM Land Off Hales Lane Drax Selby North Yorkshire	Submitted, not decided	**Construction:** There is likely to be a temporary **slight (not significant) beneficial** socio-economic effect associated with direct temporary construction employment generated by the Proposed Scheme and ID49. In addition, multiple effects are anticipated in terms of the sourcing of local supplies (indirect employment across wider supply chains), and local spend by on-site workers (induced employment). There may be temporary **slight (not significant) adverse** effects on increased demand for accommodation and community facilities, and access to development land and businesses. **Operation:** There is likely to be a permanent **slight (not significant) beneficial** socio-economic effect associated with direct employment, indirect employment, and induced employment from both the Proposed Scheme and ID49.	N/A	**Construction:** Slight beneficial (not significant) Slight adverse (not significant) **Operation:** Slight beneficial (not significant)